



Technical Bulletin #31b

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LOW SLOPE COMMERCIAL ROOFING WITH EXTREME ROOF PANELS

Low slope commercial roofing with Extreme Panels is used in residential and commercial building applications. Commercial applications of Extreme Panels on a roof are typically low slope applications that require a contractor to have full understanding of code requirements.

Low slope roof applications typically utilize a single ply roofing membrane, built up roof (BUR) or modified bitumen as the roofing system. Within these systems are several techniques to secure the roof system to the panels. These include ballasted, adhered and mechanical attachment. Ballasted systems rely on rock or cementitious pavers as a weight to hold the membrane in place. Mechanical attachment is accomplished with the use of large screws through a membrane. Adhered systems use asphalt or adhesives that are placed on a substrate or carried on the membrane to adhere the membrane to the underlying deck. In some attached systems, the adhesive layer is applied to a board or sheet that has been mechanically attached to the deck.

When Extreme Panels are used as the deck on a low slope roof system, Extreme Panels recommends that a divorcement material be placed over the panels prior to the roof membrane. This divorcement can be a slip sheet on ballasted systems, a nailed base sheet on BUR systems and a cover board such as gypsum or wood fiber with adhered systems. These divorcement materials will minimize the effect of removing the roof membrane in the future, should it fail or need to be replaced. The panels require this protection since they need to remain intact to provide the structural capacities they were designed to support.

Further consideration needs to be given regarding the local building codes in effect and the architectural requirements of the roof assembly. Most jurisdictions in the United States follow the International Building Code (IBC) for commercial roof applications. Within the code is the requirement that the roof system meet a Class A, B or C designation based on ASTM E108 or UL 790 testing. When roof systems are placed over an Extreme panel, a Class A, B or C rating needs to be determined for a combustible deck. In addition most architectural requirements for roof systems call out for a Class A roof system. The architect and roofing contractor need to be aware of the proposed roof membrane assembly to achieve a Class A rating over a combustible deck. Many times the easiest method to achieve the Class A requirement is to include a layer of gypsum board such as 1/4" DensDeck® over the panels. The attachment of this board needs to be sufficient to meet wind uplift requirements when used in conjunction with adhered membranes. In all cases the divorcement material should meet the requirements of the roofing membrane manufacturer.

When adhered systems are to be placed over Extreme Panels it is recommended that the membrane be attached with asphalt, pre applied pressure sensitive adhesives or water based adhesives. Solvent based adhesives could cause deterioration in the core of the Extreme Panels.

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